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water.

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in a fluidized bed.

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starch or flour with an organic solvent to improve the flavor and/or color of the starch or flour.

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flour with water prior to the dehydrating step and/or after the heat treating step.

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The process of Claim 62, further comprising the step of removing protein and/or lipid from the starch or flour prior to the dehydrating step and/or after the heat treating step.

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75.

The process of Claim 74, wherein a bleaching agent is used to remove the protein and/or lipid.

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The process of Claim 75, wherein the bleaching agent is sodium chlorite.

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The process of Claim 74, wherein an alkali is used to remove the protein and/or lipid.

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The process of Claim 62, wherein the granular starch or flour is a cereal, root, tuber, legume, or fruit starch or flour.

The process of Claim 66, wherein the hydrophilic solvent forms an azeotrope with

The process of Claim 67, wherein the solvent is an alcohol.

The process of Claim 62, wherein the dehydrating step is a thermal dehydrating step and wherein the thermal dehydrating and heat treating steps are carried out simultaneously

The process of Claim 72, wherein the steps are carried out for up to about 5 hours.

The process of Claim 62, further comprising the step of extracting the heat-treated starch or flour with an organic solvent to improve the flavor and/or color of the starch or flour.

The process of Claim 75, wherein the solvent is ethanol.

The process of Claim 62, further comprising the step of washing the starch or

The process of Claim 62, further comprising the step of removing protein and/or lipid from the starch or flour prior to the dehydrating step and/or after the heat treating step.

The process of Claim 74, wherein a bleaching agent is used to remove the protein

and/or lipid.

The process of Claim 75, wherein the bleaching agent is sodium chlorite.

The process of Claim 74, wherein an alkali is used to remove the protein and/or

lipid.

The process of Claim 62, wherein the granular starch or flour is a cereal, root, tuber, legume, or fruit starch or flour.

49 79. The process of Claim 78, wherein the granular starch is selected from the group consisting of banana, corn, pea, potato, sweet potato, barley, wheat, rice, sago, amaranth, tapioca, sorghum, V.O. hybrid waxy maize, waxy maize, waxy rice, waxy barley, waxy potato, waxy sorghum, and a granular starch or flour containing greater than 40% amylose.

80. The process of Claim 79, wherein the starch is a waxy starch, a potato starch, a tapioca starch, or a rice starch.

81. The process of Claim 80, wherein the waxy starch is a waxy maize.

82. A process for making a thermally-inhibited, non-pregelatinized granular starch or flour, which comprises the steps of:

- (a) adjusting the pH of a non-pregelatinized granular starch or flour to neutral or greater;
- (b) thermally and/or non-thermally dehydrating the pH adjusted, non-pregelatinized granular starch or flour to anhydrous or substantially anhydrous; and
- (c) heat treating the anhydrous or substantially anhydrous starch or flour at a temperature of about 120°C to about 160°C for up to 20 hours.

83. The process of Claim 82, wherein the pH is about 7 to about 9.5.

84. The process of Claim 83, wherein the pH is about 8 to about 9.5.

85. The process of Claim 82, wherein the substantially anhydrous granular starch or flour has a moisture content of less than 1 wt. %.

86. The process of Claim 82, wherein the thermal dehydrating step is carried out at a temperature of about 120° to about 160°C.

57 87. The process of Claim 82, wherein the non-thermal dehydrating step is carried out by extracting the granular starch or flour with a solvent or by freeze drying the granular starch flour.

58 88. The process of Claim 87, wherein the solvent is a hydrophilic solvent.

59 89. The process of Claim 88, wherein the hydrophilic solvent forms an azeotrope with water.

60 90. The process of Claim 89, wherein the solvent is an alcohol.

61 91. The process of Claim 82, wherein the dehydrating step is a thermal dehydrating step and wherein the thermal dehydrating and the heat treating steps are carried out simultaneously in a fluidized bed.

62 92. The process of Claim 91, wherein the steps are carried out for up to about 5 hours.

63 93. The process of Claim 82, further comprising the step of extracting the heat-treated starch or flour with an organic solvent to improve the flavor and/or color of the starch or flour.

64 94. The process of Claim 93, wherein the solvent is ethanol.

65 95. The process of Claim 82, further comprising the step of washing the starch or flour with water prior to the dehydrating step and/or after the heat treating step.

66 96. The process of Claim 82, further comprising the step of removing protein and/or lipid from the starch or flour prior to the dehydrating step and/or after the heat treating step.

67 97. The process of Claim 96, wherein a bleaching agent is used to remove the protein and/or lipid.

68 98. The process of Claim 97, wherein the bleaching agent is sodium chlorite.

69 92 The process of Claim 96, wherein an alkali is used to remove the protein and/or lipid. 70

Sub B100 100 The process of Claim 82, wherein the granular starch or flour is a cereal, root, tuber, legume, or fruit starch or flour. 70

101 The process of Claim 100, wherein the granular starch is selected from the group consisting of banana, corn, pea, potato, sweet potato, barley, wheat, rice, sago, amaranth, tapioca, sorghum, V.O. hybrid waxy maize, waxy maize, waxy rice, waxy barley, waxy potato, waxy sorghum, and a granular process or flour containing greater than 40% amylose. 70

102 The process of Claim 101, wherein starch is a waxy, a potato, a tapioca, or a rice starch. 72 20 71 19

103 The process of Claim 102, wherein the waxy starch is a waxy maize. 73 21 20 72

Remarks

The claims are fully supported in the original specification and claims.

See original Claim 13 for the dehydrating and heat treating steps and original Claim 20 for the temperature of 100°C or greater.

See original Claim 22 for the step of adjusting the pH to neutral or greater prior to the dehydrating step. See original Claim 23 for a pH of about 7-9.5 and the disclosure at page 12, lines 20-22 for a pH of about 8-9.5. The relevant text reads: "A pH of at least 7 is preferred. More preferably, the pH is 7.5 – 10.5. The most preferred pH range is above 8 to below 10".

See also the examples, specifically page 35, lines 25-30 for pH values of 8.5 and 9.5